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AUTHOR Miller, Bruce A.
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ABSTRACT

This paper reviews selected research studies of multigrade classrooms in Canada, Finland, eight developing nations (India, Korea, Maldives, Nepal, Thailand, Philippines, Sri Lanka, and Indonesia), and the United States. Based on information about the perceptions of multigrade instruction of principals and teachers, the following issues are emphasized: (1) teachers need special methods and must be well organized to teach; (2) teachers should be trained to teach multigrade classrooms; (3) teachers should be prepared to use cross-age tutoring; (4) social studies and science instruction need special adaptations; (5) there is a need for teaching materials; (6) there is a need for individualized teaching; and (7) incentive should be provided for multigrade teachers. Typically found in rural areas, multigrade classes range from one-room schools spanning five or more grades, to more typical elementary schools with combination classes of two grade levels. Studies of instruction in multigrade classrooms across rural America reveal that teachers use various methods to juggle the wide levels of student needs. Six key variables affecting successful multigrade teaching identified in the research were: (1) classroom organization that facilitates student learning, independence, and interdependence; (2) classroom management and discipline that emphasize student responsibility for their own learning; (3) instructional organization and curriculum that allow for a maximum of cooperative and self-directed student learning; (4) instructional delivery and grouping that improve the quality of instruction; (5) self-directed learning strategies; and (6) peer tutoring. (KS)

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Bruce A. Miller
North west Regional Educational Laboratory
101 S.W. Main, Suite 500
Portland, OR 97204

A REVIEW OF THE QUALITATIVE RESEARCH ON MULTIGRADE INSTRUCTION*

The multigrade classroom has a long history in the United States dating back to the 1800s. It wasn't until the industrial revolution that educators began to think of instruction in terms of the graded classroom. Currently, most educators view school organization around the concept of gradedness. However, the multigraded classroom remains, to this day, an integral part of both rural and metropolitan education. As Miller (1990) has pointed out, the multigrade classroom became a driving force during the 1970s movement in open education and continues to this day in many rural schools. In addition, the 21 quantitative studies reviewed by Miller indicated that students in multigrade classrooms performed academically as well as students from single-grade classrooms. In terms of affective measures, however, multigrade students out-performed their single-grade counterparts at a statistically significant level. Clearly, multigrade classroom instruction is a viable alternative to single-grade organization.

The review of qualitative literature that follows has been divided into two sections. The first section provides an overview of the problems and needs of rural school teachers in multigrade classrooms. Primarily based on surveys and interviews, this literature describes how teachers and administrators view the job demands of the multigrade classroom. The second section reviews studies and teacher reports describing how multigrade instruction is carried out in the multigrade classroom.

Establishing the Needs of the Multigrade Teacher

Imagine you have recently graduated from a university in a rural state. You would like to live and work in the small city where the university is located, but so would nearly every other graduate. You apply to the local school district, but are told that there is a long waiting list. Feeling anxious about a job for the fall, you also apply to many of the small rural schools around the state. It is in one of these schools where you eventually find a teaching job.

During your job interview with the local school board and superintendent, you are told you will teach the second grade. Moreover, when you report to work, your assignment has slightly changed and you find yourself responsible for a combination classroom of second and third graders. The principal apologizes for the change, but mentions that enrollment has dropped for the third grade, thus necessitating a combined class. You are also told that you will only have an additional eight students, bringing the enrollment to thirty-two. Some extra aide help is hinted at.

While attending the university, you learned that a combined classroom was a distinct possibility in a rural school. However, the majority of your classes focused on instructional strategies for single-grade classes. When you student taught, you also taught in a single-grade classroom. Fortunately, you did have several methods courses and practicum experiences in grouping students for reading and math. As you face the task of preparing for the opening day of school, you decide to use what you know about grouping. A roster of students is reviewed as well as the previous year's cumulative folders. Unfortunately, this information is not very helpful.

Based on what test results you could locate, you discover there is an achievement span of five grades in reading and four grades in math. You decide to combine several levels in order to reduce the number of groups. Next, you begin planning for language arts, social studies and science. Should you teach separate groups by grade level for each subject? What happens if some second graders get third grade science and social studies? Will they have to repeat this content in third grade? And what about art, physical education and spelling? By this time, your anxiety has risen and you decide to take a break and ask another teacher for some help. Maybe ask the principal. You think to yourself, "Maybe I should just keep these concerns to myself. After all, I am a certified teacher trained to teach all K through 8 grades . . . what if the students are poorly behaved . . . don't like me . . . what if . . . ?"

This fictitious teacher's thoughts and feelings are not too dissimilar from what many teachers, new or experienced, might feel as they approach the realities of teaching a multigrade classroom. As anyone who has taught knows, the greater the student diversity in the classroom (multiple achievement levels, developmental differences, differences in socio-economic status, etc.), the more one needs to plan and organize if individual student needs are to be met.

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Bandy (1980) conducted a study of the characteristics and needs of country school teachers in British Columbia, Canada. A random, stratified sample of 50 principals and 500 teachers was surveyed. This was followed by open-ended interviews with 32 teachers drawn from a representative sample of 15 small rural schools. Interview data were then cross checked with findings from the questionnaires.

Principal comments indicated that the most important factor to successful multigrade instruction was the teacher's ability to plan and organize. Most principals felt that the multigrade classroom was no problem to their teachers. Interestingly, over 90 percent of the teachers surveyed said they had multigrade classroom experience which suggests a highly skilled cadre of capable multigrade teachers. Many principals also mentioned that there were advantages to multigrade classes such as individualized instruction, tutorials by older students, and a greater opportunity for teachers to be innovative. However, principals said that the extra time needed in preparation and planning lessons was a definite disadvantage.

Teachers were asked to compare single and multigrade classrooms on a range of items. For example, they were asked to indicate whether it was "easier" or "more difficult" to motivate students in a multigrade classroom. Over half said it was more difficult. Teachers also believed that "assisting individual children" and "planning" were more difficult in the multigrade classroom. However, maintaining classroom control and student learning were seen to be about the same. The area believed to be the most difficult (84 percent) was "planning science and social studies without repetition." Clearly, teachers in this study believe it is more difficult to teach a multigrade classroom.

During interviews, teachers mentioned that special training for multigrade classrooms was critical. The most frequently mentioned need was having a practicum in a rural school. This was followed by developing skills in curriculum development (unit planning), class organization, individualizing instruction and collecting resources and materials.

Table 1 provides an overview of the implications, by respondent group, for multigrade instruction drawn from the Bandy (1980) study. Many other studies, conducted both in the United States and abroad, produced similar findings.

Pietila (1978) describes the changes that have occurred in the combined classrooms of Finland. Combined classrooms of grades 1-6 in a one-teacher school are very rare. As late as 1950, there were more than a thousand of these schools. But the instructional problems were so great that the Ministry of Education eliminated nearly all of them.

Because the small, rural schools play such an important part in delivering community services in this primarily rural country, a decision was made to sustain and strengthen them with centrally established curriculum guidelines and organizational standards. For example, the smallest school would have one teacher for grades 1-6, the next size school would have two teachers, where grades 1-3 would be taught by one teacher and grades 4-6 taught by the second teacher. The next size school would employ three teachers, with every two grades combined (1-2, 3-4, and 5-6). Curriculum was standardized by grade level. This posed a major problem for teachers of combined grades. If you teach a combined grade of third and fourth graders, what grade level do you teach--the third or fourth level curriculum, or both? Students transferring from one school to the next might find themselves studying the same material they had the previous year. To avert potential problems,

TABLE 1. IMPLICATIONS FOR TEACHING IN A MULTIGRADE CLASSROOM

Principals' Perceptions	Teachers' Perceptions
1. Teachers need methods for small group instruction.	1. Teachers must be well organized to teach.
2. Teachers must be trained to teach multigrade classrooms.	2. Teachers should be trained in cross-age tutoring.
3. Teachers must be prepared to use cross-age tutorial systems.	3. Social studies and science need special adaptations.
4. Experience must be developed in auxiliary personnel.	4. Teachers need awareness of working with individualized reading programs.

different types of grouping strategies were piloted by the Ministry of Education. The most successful practices centered on flexible grouping that was based on student and situational needs across grades rather than by age/grade groups.

Teachers in Finland who teach in combined or multigrade classrooms believe there are many advantages to multigrade instruction: "The small size of combined grades compensates many instructional difficulties. Age-wise heterogeneous groups are natural bodies where the members educate each other. The older pupils in a combined grade may function as instructors to younger ones" (Pietila, 1978, p. 15). However, materials preparation for use with flexible grouping makes a great demand on teacher time because materials must be explicit, readable, unambiguous and coherent. Materials must "include the elements . . . [which] lead to critical thinking and develop an evaluative approach in the pupil. Primary emphasis should be placed on the development of an internal evaluation system in the materials" (p. 21). With so many different levels of students to teach, the teacher must rely heavily on student self-direction and materials that lend themselves to independent study.

The complexity of multigrade instruction is even more pronounced in developing nations. In 1980, UNESCO held a conference with representatives from India, Korea, Maldives, Nepal, Thailand, Philippines, Sri Lanka and Indonesia. The conference focused on innovative approaches to teaching disadvantaged groups and teaching in the multigrade classroom. The problems and learning difficulties created by multigrade instruction were nearly similar for each country. These differences primarily related to financial, geographic and demographic variables.

Multigrade classes in these countries tend to have large numbers of students and few teachers. The most common pattern of organization is the two-grade combination class. However, three or more grades per classroom were common to all countries. Of the eight countries represented, none indicated they had multigrade schools with a range of more than four grades. For example, an individual teacher may have a classroom of 30 fourth graders and 27 fifth graders or a classroom of 35 students in grades 3 through 6. Teachers in these situations face a formidable teaching challenge.

During the conference, five general problem areas emerged:

1. Inadequately trained teachers
2. Scarcity of varied levels and types of materials
3. Lack of flexible and special types of curriculum organization for multigrade classes
4. Inadequate school facilities
5. Lack of incentives for teachers of multiple classes (UNESCO, 1981)

Similar to preservice training in the United States, all countries participating in the conference reported that the teacher preparation for working in multigrade classrooms was identical to that provided for teachers of single-grade classrooms. In other words, individuals going into teaching were not prepared for teaching multigrade classrooms.

Ironically, the concerns and depiction of problems in these developing countries echo many of the concerns voiced in the United States and Canada by multigrade classroom teachers and rural educators. The most prominent similarity is the need for curriculum and program modification that reflect the culture of the local community and the needs of students within the demands created by multigrade organization. In this regard, two recommendations emerged from the conference.

First, curriculum needs to be restructured so that it is community based: "The environment in which the community lives, the history and culture, the utilization of skilled persons in the community for improving the quality of education should be emphasized" (UNESCO, 1981, p. 80; Wigginton, 1985).

Second, innovative programs have a difficult time because the existing educational system is traditional and this constrains perceptions of what may be possible: "The four walls of the classroom and the long periods demanded by programs in different countries somewhat inhibit and restrict the child's activities. Outdoor activities should be encouraged and experiences outside the classroom should be given a place in the curriculum" (UNESCO, 1981, p. 86).

Multigrade classroom instruction places greater demands on teachers than teaching in a single grade. To be effective, teachers need to spend more time in planning and preparation. This often means modifying

existing grade level materials to ensure students will be successful. In addition, there are many demands that are simply conditions of rural life and although rural living can have many rewards, the unique demands can have a stressful impact the rural teacher (Miller, 1988). When considered along with the requirements of the multigrade classroom, it is clear that the rural, multigrade classroom teacher has a demanding, but potentially very rewarding job.

Instruction in a Multigrade Classroom

Clearly, teaching a broad range of grade levels in the same classroom is complex and demanding. How can one teacher juggle all those grades with their wide levels of student maturity, ability and motivation? How can one teacher possibly prepare for the many curricular areas, meet individual student needs and have time to eat lunch? But there are many successful teachers and students who are living proof that mixed grade classes are a viable organizational structure for learning. Although empirical studies of these classrooms are quite scarce, enough descriptive literature exists to illustrate both the complexity and the rewards of the multigrade classroom.

Dodendorf (1983) conducted a study of a Midwestern rural two-room school where 35 students, spanning five grades, were taught. The classroom was organized into two rooms. The "lower" room contained students in grades K-4 while the "upper" room contained students in grades 5-8. All aspects of classroom life were carefully observed and their achievement test scores were compared with students from urban schools. Five positive environmental characteristics emerged from the observational data:

1. School Routines: These were structured so that children began the day, completed workbook assignments, met in small groups, went to the library, told stories, etc., with a minimum amount of noise and disruption. In part, this was due to a scheduling tree where each student's assignment was posted. It was also due to the highly predictable nature of class routines. For example, spelling tests were given all at once with the unique words for each grade given in turn.

2. Group Learning: Each grade met with the teacher twice a day. When non-grouped students needed help, they sought out an older student first and then waited at the teacher's station. Aides from the community might have been helpful, but the teacher felt that confidentiality was a problem.

3. Interdependence: This area was found to be the most striking quality in the school. Younger children often approached older children for help. Mixing of ages and grades was seen both in the classroom and at recess.

4. Independence: Observed work habits of children indicated a high degree of self-discipline. They had specific assignments and timelines to meet. They passed out corrected workbooks without teacher prompting.

5. Community Involvement: Community members frequently visited the school. Mothers cooked hot lunch once a month and planned holiday parties. The board chairman stopped by to see if there were any needs. There did not appear to be a clear demarcation between the school and the community. Student attitudes toward new people entering the classroom were always hospitable and friendly. An example was the way kindergartners were welcomed into the classroom. Older students were warm and helped them, frequently explaining what was being worked on.

Results were favorable for the rural school. In terms of academics, students performed nearly the same as their urban counterparts. Only on a social studies subtest was there any significant difference. In terms of classroom climate and social relationships, the author noted that:

> Several advantages accrued for children and their parents in this rural school. The observed positive qualities far outweighed the disadvantages, and, more importantly, the values emphasized in the school reflected the community's values. This match of values is rarely achieved in heterogeneous

urban schools. Value congruence between home and school certainly fostered a secure, stable world for these children to grow up in (p. 103).

Clearly, Dodendorf's study suggests that the five-grade classroom can be a socially and academically effective learning environment for students. The implication, however, is that success depends on the ability of the teacher to organize and manage instruction so that cooperation, independence and a motivation to learn become environmental norms.

Embry (1981) describes the history of Utah's country schools since the early 1900s. Of particular interest is her description of two very small one-and two-room schools. Garrison School is less than 20 years old and consists of a small office, closet space and one large classroom that can be divided into two areas. In 1980, there were nine students covering a span of six grades. Students were given responsibility for a large share of housekeeping tasks on a rotating basis: keeping the room clean (janitor), taking care of paper and supplies (supply clerk), checking out books (librarian), ringing the bell, monitoring play equipment, organizing the calendar, leading flag salute and sharpening pencils. Each week a student was honored by not having duties for the week. Developing self-reliance, responsibility and independence in students enabled the teacher to better meet individual student needs. It also developed a strong sense of community and cooperation within the classroom.

In order to meet the needs of all students at their respective instructional level, the teacher relied heavily on scheduling and cross-age tutoring. For example, the student who was the acting librarian that week read a daily story to younger children while the teacher worked with the older students. Students also worked together to complete tasks while the teacher met students individually. Reading, math, English and spelling were handled in this individualized manner. All other subjects were taught as a group, with each student working at their particular level: art, social studies, science, and music projects were frequently employed. The entire school also sang together, played recorders, had a marching band, and published a school newspaper. Because the school is so isolated, it serves as the center of the community. Parents provided help with track meets, field trips and special programs.

Park Valley, Utah, is a slightly larger school than Garrison with two teachers serving grades K-10. Students were divided into a K-4 class and a 5-10 class. There was an aide in the lower level who taught kindergarten under the teacher's supervision. This freed the teacher to work with the older students. An additional aide came in several times a week and provided time for the teacher to work on academic subjects. On the aide's days off, the teacher worked on music, arts, crafts and physical education. A similar pattern of organization was followed with the upper level class. Because of the complexity of subject matter in the upper level class, three aides worked under the teacher's supervision.

In the lower level class, the teacher organized instruction around key concepts that could be introduced to all students and then individualized to the different levels in the class. For example, time was explained to all the students. The youngest ones drew hands on clocks while the teacher gave instruction on minutes to other students. Special activities also serve as a basis for total grouping activities: fire prevention week led to a play, Valentine's Day led to an all-school party, the Christmas program involved everyone. For Columbus Day and Thanksgiving, students all worked together on special projects. Students were also grouped by ability so that the talented second grader could work with the fourth grader or the slower student could work with younger students for special skills.

In both Garrison and Park Valley Schools, the teachers took full advantage of the flexibility afforded a multigrade classroom. The teachers used a two-phased approach to group instruction. In the first phase, they introduced a concept to the entire class (across all grade levels). This allowed for cross-grade interaction with the concurrent benefits of younger students learning from older ones. It also was a more efficient use of teacher time. In the second phase, the teacher had students engaged in closed-task activities at their respective ability levels. Students can also be easily moved from one ability level to another as needed without feeling the stigma that is usually associated with out-of-grade placements.

Special events such as holidays, field trips, or any activity that does not require strict grouping by ability (such as closed-task skills), were organized around total class participation. Every member of the class contributes and shares in the successes of everyone else. Students also learn to be responsible and self-directed, able to work independently, provide help to others, and receive help when needed. This independence is critically important because it enables the teacher to work individually with students.

Betsy Bryan's (1986) story is unique. She completed her teaching degree in 1980 from an eastern college. While getting her teaching degree she student taught in a small rural two-room school and became convinced that she wanted to teach in a similar situation. Unable to secure a position on the East Coast, she went to New Mexico and obtained a position as a K-1 teacher (so she was told by the school board). With

difficulty she found a house to live in and then school began. However, things had changed since her interview with the school board. She now had a class of 18 students ranging from ages five to nine:

> Developmentally, they ranged from kids who barely spoke and still wet their pants to children who were ready for third grade work. Some spoke Spanish and some didn't. There were child neglect cases and others who came from caring homes. A few had learning disabilities while most learned easily and delighted in it (p. 3).

To make matters even more formidable, she had no "professional direction or support, limited materials, and little experience" (p. 3). She was not supervised or expected to maintain grade level differences. However, she had student taught with two master rural teachers who provided examples upon which she could pattern her own teaching.

At first, in order to provide structure and order, she stuck to the basal reader and the other available materials. As the year progressed and she developed a relationship with her class, Bryan began developing her own materials, "scrounging through garage sales for children's books, and visiting a teacher center one hundred miles away to get ideas and supplies" (p. 3). Unfortunately, Bryan does not provide sufficient detail to allow the reader to know how she managed instruction or curriculum. She does tell us that national test scores revealed her students were performing above the national average. Although positive about her first teaching experience, Bryan left after only one year.

Unlike the Dodendorf (1983) study or the description of the two rural Utah schools, Bryan found herself an outsider in an unknown teaching situation. She faced difficulty finding housing, a sudden change in her teaching assignment, feelings of isolation from other teachers and the community. One wonders: If Bryan had remained, would her experience have turned out more like that described by Dodendorf? From her own words, it seems as if conditions in the school and community preempted that possibility:

> . . . it appears that the district [I] taught in [was] full of conflict and lacked leaders who could solve these conflicts. The staffs . . . were from diverse backgrounds and had widely different motivations and philosophies. There were bound to be problems and yet neither the community nor the administration nor the teachers were able to resolve them. [The district] lacked a sense of direction and demonstrated little concern for their teachers. Other factors that influenced [my] decision to leave included living conditions and the loneliness [I] felt trying to fit into [a] rural close-knit community (p. 5).

Ann Hoffman's (1973) story is quite different from that of Betsy Bryan (1986). Hoffman's school was smaller than Bryan's, but her class size and range of students were similar. When Hoffman first began to teach in the Kingvale two-room school, she had 15 students in grades K-3 and no aide, but after three years her class grew to 27 students and an aide was hired. Hoffman says that when she first began teaching in Kingvale, "we had a wonderful time. In the past two years the class load has grown. We still have a wonderful time . . . but a lot noisier one!" (p. 42).

Hoffman (1973) describes in detail how she organized her classroom to accommodate student needs. Clearly, her planning and organization were well in advance of instruction. Before school began, she reviewed science and social studies texts for upper-grade students and made a list of what must be covered, by week, for the entire year. Materials and films were ordered at this time.

Hoffman distinguished between those subjects that lend themselves to total class instruction and those that must be taught on a more individualized and/or graded basis. For example, health, storytime, literature, drama and music can be taught to the total class. These subjects are also considered "elastic" in that they can be altered, combined or skipped depending on circumstances. Consistent time is scheduled for high priority, skill-based subjects such as reading and math. For example, reading and math were taught in the morning, with students working independently while the teacher conferenced or taught other students. First grade was taught as a group, but the other grades are primarily individualized. Index cards were used to track individual progress. Reading was taught for 70 minutes daily.

What is clear from Hoffman's account of her classroom is that she was well organized and had a clear structure for the way instructional events unfolded. Students knew what was expected and classroom routines were well established. There was also a sense of the novel and interesting. There were daily student oral presentations (across grades) of stories, poems, reports and current events. A learning center on magnets and a center with special books for students could be found. Friends dropped into the classroom and became part of a lesson. Hoffman says she tried to keep her room interesting. But she notes the multigrade environment is not all roses:

> I can't pass a problem child on to another teacher the next year. I can't use the same old art ideas year after year. Science, social studies, music--every subject has to be completely revamped each year (p. 45).
>
> Films are boring when seen for several years in a row and so have to be changed. Room decorations must be new and different. I can't get new ideas from the teachers next door. I have to be super-prepared or I'm in for a very hectic day (p. 45).

Yet despite these changes, the strengths far outweigh the disadvantages:

> . . . [I]t is a most satisfying feeling to watch a kindergartner mature into a hard-working third-grader. A child can easily be placed ahead or back in areas in which he excels or is having trouble. Older children can work with the younger children . . . we have a ski program for physical education. The parents are friendly and helpful (p. 45).

Conclusion

The multigrade classroom and one-room school are alive and well in rural America. Stories like Ann Hoffman's from Kingvale abound if someone is there to hear them. Unfortunately, the story told by Betsy Bryan is often heard instead. Problems of inadequate facilities, poor leadership, and limited resources have been used as evidence for seeking consolidation. Without question, teaching in a multigrade classroom with more than two grades is a demanding task requiring a special type of individual. But it also requires training, community understanding and support.

As evidenced in the descriptions presented, the multigrade teacher must be well organized and put in lots of preparation time. Educators have much to learn from these teachers about classroom management and instructional organization. The multigrade classroom is an environment where routines are clearly understood and followed. Students learn to be self-directed learners, often working alone or in small groups. They must also be able to help others and serve as positive role models. A supportive family-like atmosphere often must be developed, one in which cooperation and solidarity among all students predominates. Without these elements, a multigrade teacher could not manage the vast variability in student needs. Bruce Barker (1986) does an excellent job summarizing the characteristics and working conditions that the multigrade classroom teachers faces:

> She lives in a remote setting in either the Midwest or far West, enjoys teaching in a small school . . . she teaches an average of 11 students ranging in grades one through eight, works an average of about nine hours a day in tasks related to instruction, yet is also the school custodian and school secretary. She may even prepare the school lunch and drive the school bus. . . the assignment to teach in a one-teacher school may be the most demanding of all positions in the profession, but for those who love young people and enjoy teaching, it could well be the most rewarding (p. 150).

On face value, students in multigrade classrooms would appear to fare better than students in a single-grade classroom. However, the evidence suggests that from the point of view of school organizational norms and levels of teacher preparedness, the multigrade classroom generally serves as a temporary remedy to school enrollment and financial concerns.

In other words, most multigrade (especially combined grades) classrooms are viewed as temporary remedies to be endured for a year (or so) until things return to "normal." Lest we too quickly forget our educational heritage in the district school, there still are more than 1,000 one-room schools in the United States where three or more grades are taught together (Muse, Smith & Barker, 1987). But the tide of teacher and administrative opinion strongly favors organizing schools by grade level.

The skills needed to effectively teach the multigrade and the single-grade (multilevel) classroom appears to be quite similar. The differences between the two classrooms may be more a product of socialization and expectation than of fact. Clearly, students are harmed when the teacher fails to recognize and teach to the individual differences in a classroom. It also is apparent that teachers are harmed when they have not been adequately prepared to teach students with varying ages and abilities. Wragg (1984) does an excellent job summarizing these instructional implications when he describes the results of a large-scale study of teaching skills:

> There seemed to be much less confidence among teachers about how best to teach bright pupils and slow learners in mixed-ability classes than in any other aspect of professional work we studied during the project. Most mixed-ability teaching was to the whole class, and some schools made almost no use at all of cooperative groupwork . . . Even the teachers we studied who were regarded as successful found it very exacting to teach a mixed-ability class well, and were less sure about their teaching of bright pupils than about other aspects (p. 197).

What does the research tell us regarding the skills required of the multigrade teacher? Wragg's (1984) observation suggests that the skills needed of the single-grade, multiability classroom are similar to those of the multigrade teacher. With an increase in the number of grades taught in a single classroom, a greater demand is placed on teacher resources, both cognitive and emotional. Six key variables affecting successful multigrade teaching were identified from the research:

1. Classroom organization: arranging and organizing instructional resources and the physical environment in order to facilitate student learning, independence and interdependence

2. Classroom management and discipline: developing and implementing classroom schedules and routines that promote clear, predictable instructional patterns, especially those that enhance student responsibility for their own learning. Developing independence and interdependence is also stressed.

3. Instructional organization and curriculum: planning, developing and implementing instructional strategies and routines that allow for a maximum of cooperative and self-directed student learning based on diagnosed student needs. This also includes the effective use of time.

4. Instructional delivery and grouping: instructional methods that will improve the quality of instruction, including strategies for organizing group learning activities across and within grade levels, especially those that develop interdependence and cooperation among students

5. Self-directed learning: developing skills and strategies in students that allow for a high level of independence and efficiency in learning individually or in combination with other students

6. Peer tutoring: developing skills and routines whereby students serve as "teachers" to other students within and across differing grade levels

In the multigrade classroom, more time must be spent in organizing and planning for instruction. This is required if the teacher wants to meet the individual needs of students and to successfully monitor student progress. Extra materials and strategies must be developed so that students will be meaningfully engaged. This allows the teacher to meet with small groups or individuals.

Since the teacher cannot be everywhere or with every student at the same time, the teacher shares instructional responsibilities with students within a context of clear rules and routines. Students know what is expected. They know what assignments to work on, when they are due, how to get them graded, how to get extra help and where to turn them in.

Students learn how to help one another and themselves. At an early age, students are expected to develop independence. The effective multigrade teacher establishes a climate to promote and develop this independence. For example, when kindergarten students enter the classroom for the first time, they receive help and guidance not only from the teacher, but from older students. Soon, they learn to be self-directed learners capable of solving many of their own needs. They become self-sufficient. Kindergartners see how other students behave and they learn what is expected of them. Because older students willingly help them, kindergartners also learn cooperation and that the teacher is not the only source of knowledge.

Instructional grouping practices also play an important role in the successful multigrade classroom. Grouping is a strategy for meeting teacher and student needs. The teacher emphasizes the similarities among the different grades and teaches to them, thus conserving valuable teacher time. For example, whole-class (across grades) instruction is often used since the teacher can have contact with more students. However, whole-class instruction in the effective multigrade classroom differs from what one generally finds in a single-grade class.

Multigrade teachers recognize that whole-class instruction must revolve around open task activities if all students are to be engaged. For example, a teacher can introduce a writing assignment through topic development where all students brainstorm for ideas. In this context, students from first through eighth grade can discuss and share their different perspectives. Students soon learn how to listen and respect the opinions of others. For the older students, first graders are not simply "those little kids from the primary grades down the hall." They are classmates. Learning cooperation is a survival skill--a necessary condition of life in the multigrade classroom. Everyone depends on each other and this interdependency extends beyond the walls of the school to include the community.

But teaching in the multigrade classroom also has many problems. It is more complex and demanding than the single-grade classroom. A teacher cannot ignore developmental differences in students nor be ill-prepared for a day's instruction. Demands on teacher time require well-developed organizational skills. Clearly, the multigrade classroom is not for the timid, inexperienced, or untrained teacher.

The implications for teacher educators, rural school board members, administrators, teachers and parents are far reaching. For those seeking more information and greater detail regarding teacher preparation, student performance and instructional strategies for the multigrade setting are referred to the complete text from which this paper has been abstracted:

> *The Multigrade Classroom: Strategies, Promising Practices and Resources for the Multigrade Educator* available from Northwest Regional Educational Laboratory, 101 S.W. Main Street, Suite 500, Portland, Oregon 97204.

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